

THE HISTORY OF RANKINE & HILL

BY

John A. Hill

In October, 1955 after the death of Malcolm Stanley and the subsequent dissolution of the partnership of Stanley and Llewellyn, John Rankine and John Hill founded the partnership of Rankine & Hill.

With the partners we had 4 draftsmen, Jack Powell, Barry Stevenson, Les Heggie and Malcolm Lehmann.

In July of 1956 Mike Garnett joined the firm as an engineer followed a year later by Reg Wells in the meantime an office had been established in Brisbane, Newcastle and Wellington, New Zealand. The engineers in charge of these offices were Peter McAdam in Brisbane, John Gam in Newcastle and after Ken Midson, Noel Rowley in New Zealand. After John Gam resigned in 1958, John Talty controlled the fortunes of our early practice in Newcastle.

During the middle of 1960 an association was formed with Slocum & Fuller, Mechanical Engineers of New York and on the 5th December, 1960, Dan Barton and Maurice Savitt arrived from America to control the mechanical and electrical engineering of our association. Just prior to that, mechanical engineers were employed so as we could have a staff at the start of our M & E operation.

In Sydney, particularly, and Australia generally about this time there was a feverish amount of building and general civil engineering activity and consequently a dearth of good engineers and draftsmen. The decision was made to recruit overseas and a series of advertisements were placed in the South African press as that country was being disturbed for the first time by the apartheid policy and a large group of people were leaving the country. We employed some 10 engineers and draftsmen from South Africa and Rhodesia, the most respected and the only member of that group left is Syd Yates who was one of our original M & E engineers arriving in Australia only one day after Danny Barton.

Bruce Sinclair joined the firm in 1961 and a year later 1962 Doug Palmer, it was this year that Mike Garnett became a partner. It was in June, 1962 our first venture into the far east commenced with an office established in Kuala Lumpur. Eric Sneath moved from our Canberra office to look after that operation, Ralph Ellis took over from Eric in Canberra in July, 1962.

In 1959 some 3 years previous, Alan Hayes joined the firm as an engineer, almost at the same time as Reg Wells became an associate. Alan had a couple of goes before he could stand Consulting Engineering, resigning in February, 1961 and rejoining the firm later that year. Alan was very much involved with transportation; the current controversy on transportation was as alive in 1960 as it was today, and at the time the Government introduced De Leuw Cather Transportation Consultants from Chicago to advise on the expressway system for Sydney. We formed an association with this group and learnt much of the methods of traffic surveys and also design criteria for expressways, interchanges and the like. We had a large group of specialist arrive to work with our engineers and it is interesting to note that their living allowances at that time alone matched our local salaries.

At that time also a rash of developers appeared on the Australian scene when the total paid up of companies had only to be \$2. Some of these organisations were very genuine professional people developing areas of holiday as well as residential land. Some were not. Guess who we got involved with?

With a very enthusiastic endeavour to service the engineering requirements of these people we employed surveyors headed by David Lambden from Canada in no time at all we had a total staff in the survey section of about 20 people and we made substantial outlays on sophisticated Wild instruments to carry out the work. Large tracts of land were subdivided on paper with detailed survey being executed and engineering plans produced for areas in Port Macquarie, Kurrajong Heights. Then our clients in a sense 'disappeared', leaving us large outstanding fees which we were unable to recoup. We had a large active and very expensive survey group that we tried desperately to keep busy, we managed to secure road surveys in Sydney and Melbourne in the metropolitan areas and also work in country. But I think it was a great relief when George Hamm Surveyor took over the remnants of our group and we formed a loose association with George to carry out surveys. This association, with George Hamm assisted us in the work we were subsequently to do in the snow fields.

Ralph Ellis as mentioned took over in Canberra in 1962 and in 1962 Wilt Cramp joined the firm. In 1963 Ralph Ellis moved to office of Wellington in 1962 by Fred Slater, not much later Ralph went to U.K. for an extended period and Harry Priddey who joined Rankine & Hill in Wellington in 1962 took over Auckland office in 1964.

It was this year 1962 that the partners invited Prof. Mauer, Professor of Transportation Engineering University of California, Berkeley to visit and give a series of lectures. These lectures were very successful and Rankine & Hill opened up the attendance to Government and Semi-Government Authorities.

Tim Barwood also joined the firm February 1962 and 1965 Jim Glen joined and carried on the control of Canberra office from W Gordon.

Geoff Black who joined the firm in 1959 became a partner in April, 1962 and in December, 1965 left Newcastle to the temporary control of John Talty when he moved to Melbourne. Ralph Ellis who had been made an associate took over from John Talty and ran the office till his move in 1975 to Kuala Lumpur. It was in 1956 that Jim Glen became an associate.

The Indonesian confrontation and the consequent disruption of Malaysian activities caused a rethink of the Kuala Lumpur office and in 1965 we asked Eric sneath to return and take over in Brisbane from Ron Mallett who had replaced Peter McAdam after his resignation.

In April 1966 the Wellington and Auckland offices of Rankine & Hill merged with the New Zealand firm of Brickell, Moss to form Brickell, Moss Rankine & Hill in those cities and later in Australia.

N.C.D.C. work blossomed and Tim Barwood joined Jim Glen in Canberra to assist in design from that office. 1967 saw the arrival of Keith Davies and in that year Reg Wells left for a years work in American and England.

About that time the partners employed Osmond Turner personnel consultants of London to review the total senior engineering staff and recommend the optimum use of these people in their own and the firms interest, 1966 also saw the very expensive plunge in the lease/purchase of the 1130 computer then the third only in Australia. Alan Hayes became a partner also in that year followed next year by Dan Barton.

Leeton office was established in 1968 with promise of work in the irrigation field as well as the local shire work. Bob McGhee a local engineer from the WC and IC took charge in Leeton and for a few years we had a happy sojourn in the country. Unfortunately volume of work could not sustain an office in the Riverina.

1968 and 1969 were active in a major change in the partnership, Geoff Black resigned as did Eric Sneath who joined Doug Palmer in a partnership in Brisbane. Ralph Ellis, Jim Glen, Reg Wells and Keith Davies became partners and John Donnelley joined the firm from America as an associate. Computer Engineering Applications was formed as a separate company with share holdings being offered to other consultants. Late also that year Gordon Rigg became a partner and took over the Melbourne office.

1970 saw the somewhat short union with Bates, Smart & McCutcheon Architects to form Urban Development and Planning Associates. This association lasted for four years.

The first geographical change occurred in April of this year when we changed our address from 40 Miller Street, to West Street. However, we had moved up and down in 40 Miller Street for some time and knew about moving.

1972 saw the start again in the east with the establishment of offices in Singapore, Kuala Lumpur and Hong Kong under John Donnelley as partner in charge. Rod Oehlers in Kuala Lumpur and Chris Ting in Hong Kong.

I have dealt only with senior people and to have continuing interest, mainly the people you still see in the firm. However there are many engineers known to you all who have had a time with Rankine & Hill, we like to think in most cases an apprenticeship for their own subsequent ventures some of these names and their organisations:-

Laurie Brown

Overseas Manager of Trinidad
Bitumen based in London

Bruce Sinclair & Jack Knight

Old employees who run Sinclair & Knight

Bob Morgan

Morgan & Stanley

Lester Stanley

David Tierney

Partner with Parkill Freeman

W. Gordon, John Bevege, Eddie Blore, John Brooker who all run their own practices.

John Talty, & Malcolm Lehmann, who run a structural practice.

Ted West now of Planner West, Mechanical Consultants.

Eric Sneath & Doug Palmer formed a partnership in Brisbane both are now dead, tragically very much before their time.

Ron Parker, Jack Powell, Ernie Gillon, Kevin Ryan, Ray Millington, Peter Cusworth, Kevin Noble all superb draftsmen run drafting or similar services as separate identities.

During all this time the firm was involved in a great variety of work. In our earlier years we were considered innovative engineers and I like to think that we have carried the stamp of originality through till today. Many of the jobs we did introduced 'first' in Australian engineering practice, particularly in design and presentation.

Our earlier successes in structural engineering was in no little part related to the excellent drawing standard which we continue to maintain. Whether the Architect knew the soundness of the engineering or not he certainly enjoyed the detailing. The responsibility for this was vested in our chief draftsmen firstly Jack Powell, Jack Dudley, Bill Wilson and Doug Wintin.

No. 1 job on our job book was a task for Collard, Clarke & Jackson, a job for Gartrell White Bakery, it is interesting to note that we have still this combination of clients, the architects and the bakery. Perhaps the nomination of what perhaps were milestone jobs may help to learn of some of the work we have done.

British Motor Corporation the large complex for BMC at Kensington was a very early job, in fact No. 10 in our job book and that massive job continued for many years. It incorporated a very large factory complex with difficult foundation problems not only for the building but the large body presses. Also early in our career General Motors became a client and we had continuing work from this organisation not though in the same scale as BMC.

BHP and AIS directly and indirectly gave us work related to sinter plants and perhaps our first real civil engineering tasks in a railway siding, bridge and related earthworks.

Legal & General office for Stephenson & Turner was an early start to multi-storey work and a great impetus to our structural work was the A.M.P. at Circular Quay, then hailed as a skyscraper.

In New Zealand the catalyst in the same way as the A.M.P. was the Otago Hospital and Boiler House followed by the then prestigious Shell Building in Wellington, one of the first steel framed multi-storied rigid buildings using a then unique fire proofing arrangement for structural beams.

In our early years we were involved with many and varied industrial factories, one including a travelling crane of 100 ton lift capacity, an exercise in heavy steel design. Related also was the design of coal washeries, coal handling plants, silos, wastewater treatment plants, which led through to John Thompson the Boiler People, asking us to design and supervise a spate of large water treatment plants in the state Cooma, Newcastle, Orange, Cowra, Bourke.

The N.C.D.C under the guidance of Sir John Overall saw the potential of Rankine & Hill and with little previous background other than our enthusiasm and a capable engineering organising ability they gave us our first task in Canberra. I think it was the tree clearing contract, our first job removing all the trees for the land to be inundated by the lake, again an engineering first, who up till now had written a specification describing the task of digging out a stump - nothing is too hard.

The report on the Western Lakes Area - The preliminaries to the formation of the lake perhaps our first environmental impact study, not called that in 1960. It was the impact of the formation of the lake when the waters were restrained by the dam. This report I know was responsible for the studies which followed even to the transportation studies.

Canberra work had such odd work as the design of nursery ponds, rowing course, yachting basin, investigation of aquatic weed growth and toilet blocks on remote islands. A job well done stimulates others and we became the best public convenience engineers for some time, I think we still have that unique ability. Our masterpiece is known in Goulburn as the flying toilet.

We were very much the underdog in our work, with De Leuw Cather. Their experience assisted us greatly and some years later we felt that we could match their ability and with Australian engineers, we produced for a varied clientele, studies which suited the local requirements much more than the grandiose schemes of Americans based on their population.

These transportation studies were for Canberra, Bendigo, Townsville, Brisbane Down River, Timaru, Hamilton, Rockhampton Mackay. These studies led us into the more important work of being given the tasks nominated in these preliminary designs. Our results in these areas were not accepted by the State Road Authorities as much as our clients, however this has been overcome to a certain extent and our ability now recognised and accepted by the States. Paralleling these works were harbour works in association with Coode & Partners, we were involved initially in the study for the Gove Harbour,

work continued with Coode & Partners even to major works, however that association recently dissolved never living up to its initial promise.

Perhaps a milestone job was the Qantas Wentworth Hotel building where due to the international flavour of the architectural group Skidmore Owings & Merrill, we were exposed to the American approach to consultancy for architects. This work gave us the opportunity of having structural mechanical and electrical engineers working in America and also an insight into their system of putting together a multi-million complex, we learnt a lot, a lot of things to do and a lot of things not to do the experience was worthwhile.

It is impossible to detail the variety of work even some of the smaller projects had engineering significance. Chair lifts at Thredbo where we involved helicopters to place concrete, soda ash silos built in steel for the first time. Foundation design for a refinery where prior loading of existing ground was introduced.

Another landmark was the Lucas Heights Project where we learnt of the problems associated with buildings housing reactors and ancillary buildings which had to have special requirements related to radiation. With these groups of buildings, we used massive precast elements which set a pattern for many other engineers as the precast industry proved its ability to perform.

Way back in 1957 our introduction to Kaiser Engineers, then the major contractors at the Snowy Mountain, was made when our exciting design in prestressed concrete for the Kings Street Bridge stimulated their interest so that they took one of the partners to California and put together a tender for the job with Raymond Pile. Melbourne and the Country Roads Board, I am sure, wish with hindsight that the tender has been accepted and so obviated the costly repairs on the design accepted after its collapse. The association continued with Kasiers who used us for odd jobs such as checking construction equipment and the set out and design of Sue City, one of their construction villages amongst many others.

The result of our engineering works have reflected an invitation to join learned bodies to act as judges of engineering excellence, to serve on standard committees, to product technical manuals and to be involved in government advisory bodies all a reflection of a job well done. We have won 3 lighting awards one engineering excellence award and have commended for our regional studies.

Not always well done, we have made our mistakes however the record stands that we have only once called on the resources of our insurance policy for the sum of £600 or thereabouts but there was another occasion where we would have liked to invoke insurance but at the time of claim our cover had lapsed as it was over 6 years before the claim was made. The claim had no relation to our engineering work. Other errors, minor perhaps as they were, have cost a lot of time and energy in correcting and I think we have become more conscious of responsibility spurred by the climate of litigation which is prevalent. This still should not restrain us in thoughts novel because these thoughts

are usually considered carefully and become excitingly effective. This is not my scene however so I had better get back to history.

Coming right up to date.

An association with the Scottish bridge designers Fairhurst & Partners was concluded in 1973 when we formed a consulting group Bridge Design Consultants under the day to day control of Andrew Beveridge.

Following our offices in the far east, we have established in 1975 Keith Davies in Bahrain and Joe Duffy in Doha, where we hope to relieve some of "funny money" by doing excellent engineering in the variety of our fields.

A large amount of our original activities in the mechanical and electrical engineering fields broke totally new ground in the requirements we set for contractors. Prior to the arrival of Dan Barton and the team he led, workshop drawings were rarely if ever produced by contractors. Much time and money was spent by Rankine & Hill in the control of the jobs for our clients but more importantly changing the lax procedures which had dominated the mechanical and electrical contracts in major buildings.

As a measure of the variety of work of the range includes

A 96 wheeled trailer originally design to carry 120 tons of end casting for steel rolls from Sydney to Wollongong, modified some 3 or 4 times and most recent the carriage of 200 ton stator to Munmorah Power Station.

A Rotolator which was Australia's first which could milk 100 cows in 10 minutes or something.

A kiosk designed and built in 6 weeks for the visit of the Queen to Canberra in 1964. Unaltered it is the permanent display headquarters for the N.C.D.C.

A massive paper mill at Shoalhaven, a bowling green at Willoughby a fountain at Caprice restaurant, a frame work to support an Octopus, a suspension bridge over the Brisbane river, a Carburetted water gas plant for AGL, and investigation for total energy for the Rocks, a beam in John Rankine's house, a series of modern churches all in the office at the one time for Roman Catholic, Anglican and Jewish Faiths. A dam at Thredbo, a water treatment plant for a winery and a milkery. Varied Place, A.N.Z. Computer Control Centre, A.N.Z. Head Office, Railway Square Tunnel. Commonwealth Gardens, a large ornamental garden in Canberra with lakes and artificial stream and a bog garden. Many bridges and sewerage treatment plants. A series of hospital in Iraq.

Training and Scholarships. This section is well covered in brochure, as I wrote that, I'll repeat it here.

Our policy is to keep ourselves fully informed on the latest local and overseas developments in the fields of our engineering services. To implement this policy the firm holds regular seminars with its own organisation and invites guest speakers who are experts in their particular field to ensure that the technical staff is kept well informed on trends in engineering.

From time to time overseas professor and prominent engineers are brought to Australia to give lectures and conduct courses of study for the staff.

Engineering staff is encouraged to attend post-graduate courses and each year a number of trainee draftsmen are engaged and they attend technical college or part-time university courses. We conduct an active programme for engineering technicians and draftsmen from other countries and for some 8 years have had 'in house' training of Malaysian and New Zealand nationals. Financial assistance is given by the firm for all courses and in the case of post-graduate study, the whole of the fees are paid.

As an extension of the training programme, overseas, travel scholarships are awarded to enable selected engineers to gain post-graduate study in other universities or to further their experience by travel. Alternatively, positions are secured in overseas consultants' offices for engineers. Fares are paid as well as living expenses for these engineers. Partners attend overseas conferences and travel overseas reviewing international developments in all aspects of engineering.

Any history of Rankine & Hill cannot be complete without people some of you will remember some of these folk who for many reasons have left an impact with us. There will be many names you will not be able to put faces to, in others it may stimulate old memories because Rankine & Hill despite what I have said only exists because of the people who have contributed to make it a firm of engineers.

Remember Dick Emery, Jack Dudley, Pat Ludgate, Jan McLeannan or Grimes, Jim Crawford, Peter Bocking, Matt Francki, Aileen Merchant, Tos Feener, John Hayes, Carol Adorini, Murray Jacobs, Sammy Low, Brian Healey, John Chivers, Carl Sarelius, Narelle Findlay, John Kerrigan, Alex Yemas, Bruce Brown, Manfred Marcus, Howard Steveson, Audrey Campbell, Tim Fenton, Otto Kemnes, Cree Marshall, Emil Hervol, Pat Tingwell, Bernard Jeffreys, Frank Hurd & of course Harold Heytman.

It is a pity my task was not people because I think the variety of personalities we have had and still have made the work, the frustration, and enjoyment, a part of our life.